CERTAMEN MELASTOMATACEIS VII.

John J. Wurdack
Dept. of Botany, U. S. National Museum

CHAETOLEPIS SANTAMARTENSIS Wurdack, sp. nov.

In indumento calyceque, C. microphyllae (Bonpl.) Miq. distanter affinis, sed cum foliis amplioribus 5-nervatis vel breviter 5-plinervatis, floribus amplioribus, petalis roseis.

Trichomata leviter barbellata. Rami cum petiolis laminarum venis primariis subtus dense strigosi vel longo-strigulosi. Petioli 1-2 mm; lamina 8-18 X 5-8 mm oblongo-elliptica apice basique rotundata rigidiuscula breviter (ad 2 mm) 5-plinervata nervulis obscuris, supra modice longo-strigulosa, subtus in superficie modice setulosa. Flores ad ramulorum apices 1-3-aggregati, cum bracteis foliaceis 2-4 involucrati; bracteae ad 8 mm longae ovato-oblongae, supra apicem versus strigulosae basim versus glabrae, subtus setulosae. Hypanthium 3-3.5 mm longum apicem versus glabrum ad basim extremum sparse vel modice strigulosum; calycis lobi cum pilis 1-3 alternantes 2 X 2.5 mm late ovati apice obtusi vel rotundati extus centraliter sparse strigulosi intus glabri ciliolati. Petala 9 X 8 mm obovata asymmetrice truncata ciliolata. Filamenta 5-6 mm longa; antherae 3-3.5 mm longae oblongae apice minute uniporosae, connectivo non prolongato sed dorsaliter leviter elevato. Stylus 8-9 mm longus; stigma punctiforme; ovarium 4-loculare apice dense setulosum.

Type Collection: J. Cuatrecasas & R. Romero Castañeda 24669 (holotype US 2325392), collected in subpáramos at "hoya del Río Donachuí near Col", southeastern slopes of Sierra Nevada da Santa Marta, Dept. Magdalena, Colombia, elev. 3070-3100 m, Oct. 9, 1959. "Tree 2 m. Leaves yellowish dark-green above, yellowish beneath. Petals lilac-violet. Anthers yellow".

C. microphylla has broadly ovate basally nerved leaf blades only 5-7 mm long, hypanthia 2 mm long, and yellow petals 3.5-4 mm long with a single apical seta. The anther form of C. santamartensis is like that of C. anisandra Naud. and C. loricarella Triana, with the barest suggestion of a basal connective appendage; both of these more-distant relatives are otherwise quite different.

CHAETOLEPIS PERIJENSIS Wurdack, sp. nov.

De omnibus speciebus non squamoso-pubescentibus differt foliis uninervatis.

Frutex viscosus 0.3-0.6 m altus; ramuli acute quadrangulares demum teretes cum petiolis hypanthiisque primum dense granuloso-furfuracei demum glabrati ad nodos non setulosi. Petioli 0.3-0.5 mm; lamina 7-11 X 1.5-2.2 mm anguste oblonga apice rotundata basi acuta rigida, supra et subtus dense resinoso-punctata ad margines obscure ciliolato-serrulata setulis appressis 0.1-0.2 mm longis caducis alioqui glabra. Flores in ramulis brevibus solitarii terminales 4-meri. Hypanthium (ad torum) 2.3 X 1.8 mm; calycis tubus 0.2 mm altus in sinibus unisetulosus setula 0.2 mm longa, lobis 1 mm longis triangularibus hebeti-acutis appresso-ciliolatis. Petala 4-4.3 X 2.4-2.8 mm elliptica apice late acuta et apiculata eciliata glabra. Stamina isomorphica glabra; filamenta 3.5-4.2 mm; antherarum thecae 2.1-2.3 mm anguste oblongae minute porosae, connectivo basi inconspicue (0.1-0.2 mm) prolongato simpliciter articulato. Stylus 7.5 X 0.2 mm glaber; stigma punctiforme; ovarium 4-loculare apice breviter 4-lobulatum et modice strigulosum setulis 0.2-0.4 mm longis; semina 0.6 X 0.4 mm cochleata laevia.

Type Collection: J. Cuatrecasas & R. Romero Castañeda 25118 (holotype US 2339465), collected in páramo between Cerro Venado and Cerro Avíon, Sierra de Perijá, Dept. Magdalena, Colombia, elev. 3270-3350 m, Nov. 8, 1959. "Leaves light green. Petals and stamens yellow."

Paratypes (both from Sierra de Perijá, Dept. Magdalena): Cuatrecasas & Romero Castañeda 25082, from Sabana Rubia, páramo east of Manaure, elev. 3000-3100 m; M. L. Grant 10870, from páramo 12 km east-northeast of Manaure 1 km from Venezuelan border, elev. 3000 m.

C. loricarella Tr., the only other species with 1-nerved leaf blades but with squamose pubescence, does not seem to be a very close relative. C. perijensis should be associated with C. alpina Naud., C. thymifolia Tr., C. cufodontisii Standl., and C. sessilis Pittier; these four species have setulose branch nodes, 3-nerved usually broader leaf blades, and much more prominent intercalycine setae 0.6-1.1 mm long.

MICONIA ARCHERI Wurdack, sp. nov.

Sect. Tamonea, M. kraenzlinii Cogn. affinis sed cum foliis supra margines versus sparse gracili-setulosis filamentis styloque basim versus sparse glanduloso-puberulis.

Frutex 1-2 m; rami teretes cum foliis subtus inflorescentiis bracteolis hypanthiisque densissime cum pilis patulis

stellato-plumosis plerumque 0.3-0.4 mm longis vestiti. Petioli 0.5-1.2 cm; lamina 5.5-11 X 1.5-4 cm elliptica apice breviter (0.4-1 cm) graditerque acuminata basi obtusi vel vix rotundata coriacea, supra primum sparse (praecipue marginem versus) gracili-setulosa (pilis i. s. flavidis ad 1 mm longis) et modice stellato-puberula demum glabrata et vix rugulosa, 5-nervata nervis secundariis supra inconspicue impressis subtus leviter elevatis et ca. 2 mm inter se distantibus nervulis subtus inconspicue reticulatis, ad margines denticulata dentibus acutis ca. 0.5 mm altis et ca. 2 mm inter se distantibus. Panicula 1.5-3 cm pedunculata 3-6 cm longa pyramidato-oblonga; flores plerumque 5-meri in ramis lateralibus 5-10 mm longis glomerati (plerumque in dichasiis) sessiles; bracteolae 2.5-4 X 0.5-1 mm lanceolatae tarde deciduae. Hypanthium (ad torum) 3.5 mm longum campanulatum; calycis tubus 1.5 mm altus extus et intus lobi interioresque densissime stellato-puberulus, lobis interioribus 0.5 mm altis late triangularibus vel oblatis apice obtusis vel rotundatis, dentibus exterioribus callosis non eminentibus per pilos occultis. Petala 6.5-7 X 3-3.5 mm obovato-oblonga apice asymmetrice emarginata extus modice stellulato-furfuracea ad margines retrorse stellulato-ciliolata intus glabra. Stamina in dimensionibus vix dimorphica in forma isomorphica; filamenta 6 vel 4.7 mm basim versus sparse glanduloso-puberula; antherarum thecae 5.3 vel 4.6 mm curvato-subulatae, connectivo basi 0.2-0.3 mm lato et cum setulis ca. 8-15 glandulosis 0.1 mm longis ornato. Stylus 7.5 X 0.4-0.6 mm basim versus sparse vel modice glanduloso-puberulus; stigma truncatum; ovarium 5-loculare 1/3 inferum apice conicum et in collum 0.6 mm altum modice strigulosum circum stylum protractum.

Type Collection: W. A. Archer 232 (holotype US 1541878), collected at Bello, Dept. Antioquia, Colombia, elev. 1500-1800 m, June 19, 1930.

Paratypes (all Dept. Antioquia): Archer 768, from Medellín, elev. 1500 m; Molina & Barkley 18An368, from Cerro El Volador east of Medellín, elev. 1600 m; Bro. Daniel 1223, without definite locality.

M. kraenzlinii has only stellulate hairs on the upper leaf surface, pinoid hairs with very short spicules on the lower leaf surface, a slightly smaller (ca. 4 mm long) hypanthium plus calyx tube, and glabrous filaments and style. Another probable (ex type photograph and description) relative is M. mollis Tr., with only stellate hairs on the upper leaf surface and much more prominent foliar teeth, as well as glabrous filaments, but apparently the same subulate anthers. Vegetatively, M. archeri resembles M. versicolor Naud., a

pleiostemonous species with somewhat more compact pubescence, shorter hypanthia, and oblong non-attenuate anthers. Asplund (in litt.) several years ago noted that M. stricta Cogn. is synonymous with M. versicolor. The Orinoco station cited for the Bonpland collection of M. versicolor is surely erroneous; such geographical errors are not uncommon in the Bonpland Melastomataceae (cf. Graffenrieda rotundifolia (Bonpl.) DC., Brachyotum ledifolium (Desr.) Tr. as treated by me, etc.)

MICONIA RHODANTHA Wurdack, sp. nov.

Sect. Amblyarrhena. M. annulatae Tr. distanter affinis sed cum foliis minoribus crassioribus pedicellis longioribus antheris brevioribus.

Frutex 1-3 m glaber; rami teretes nodis incrassatis. Petioli 0.5-1.2 cm; lamina 2.5-6 X 1.5-3 cm elliptica apice late acuta et apiculata basi late acuta vel obtusa rigide coriacea, supra nitida venis venulisque vix impressis, subtus opaca venis venulisque bene conspicuis reticulatisque, 3-5-nervata ad margines minute serrulata dentibus ca. 0.1 mm apiculatis. Panicula 3-6 cm longa diffusa; flores 5-meri; pedicelli 5-10 mm longi ad medium vel paulo supra medium articulati, bracteolis 4-5 X 0.4-0.7 mm lineari-oblongis apiculatis mox deciduis. Hypanthium (ad torum) 2.2-2.5 X 2.3-2.5 mm; calycis tubus 0.5 mm altus, lobis interioribus 1.5-1.7 mm altis ovato-oblongis apice rotundatis, dentibus exterioribus callosis mucronulatis ca. 0.1-0.2 mm eminentibus. Petala 4.5 X 4 mm suborbicularia cucullata apice vix emarginata inconspicue pruinosa ad margines cum glandulis sessilibus minutis dense obsita. Stamina isomorphica; filamenta ca. 2 mm longa glabra; antherarum thecae 1.2 X 0.7 mm oblongae crassae ventraliter paulo infra apicem uniporosae, connectivo densiuscule glanduloso-papilloso basi 0.3 mm prolongato dorsaliter vix elevato ventraliter inconspicue bilobulato. Stylus 2.7 X 0.5-0.6 mm glaber; stigma truncatum; ovarium 3-loculare 1/2 inferum apice in conum glabrum 0.9 mm altum protractum.

Type Collection: Bro. Daniel 1624 (holotype US 1744841), collected at Abejorral, Dept. Antioquia, Colombia, Aug. 1938. "Corolla red; fruit violet".

Paratypes (all Dept. Antioquia): Bro. Tomas 1517, from Yarumal; Metcalf & Cuatrecasas 30111, from between Valdivia and Yarumal, elev. 2000 m; Hodge 6876, Barkley & Johnson 252, both from vicinity of La Ceja, elev. 1800-2500 m.

While M. rhodantha shows the same branch node swellings as M. annulata and M. killipii Gleas., as well as the same general inflorescence type as M. alypifolia Naud. and M. livida Tr.,

the placement remains dubious. The anthers are rather like those of Sect. Chaenopleura, but not at all rimose. The leaf texture and venulation (but not the floral features) are reminiscent of that of M. cundinamarcensis Wurdack, while the hypanthium and petals are suggestive of the general affinity of M. compressicaulis Wurdack. From Gleason's photograph, M. nodosa Cogn. is somewhat similar vegetatively, but with pli-nerved leaves furfuraceous on the veins beneath and smaller sessile flowers.

MICONIA VALLENSIS Wurdack, sp. nov.

Sect. Cremanium. M. compressicauli Wurdack et M. gonio-cladae Tr. affinis sed cum floribus maioribus.

Fere glabra. Rami acute quadrangulares cum foliis inflorescentiisque primum minutissime furfuracei mox glabrati ad nodos inconspicue strigulosi. Petioli 4-5 mm longi compressi; lamina 3-5 X 1.5-3 cm anguste ovata apice acuta basi rotundata vel vix cordata rigida i. s. lutea, 5-nervata nervulis subtus inconspicue reticulatis, ad margines inconspicue denseque serrulata dentibus appressis ca. 1 mm inter se distantibus. Panicula 2.5-4 cm longa pauciflora; pedicelli 7-9 mm longi supra medium articulati, bracteolis 4-5 X 0.7-1 mm anguste oblongis acutis mox caducis; flores 5-meri. Hypanthium (ad torum) 3.8 mm longum glabrum; calycis tubus 0.5 mm altus, lobis interioribus 2.3 mm longis oblongo-ovatis rotundatis, dentibus exterioribus oblongo-triangularibus acutis lobos interiores 0.3 mm brevioribus. Petala 6.5 X 4.5-4.8 mm, suborbicularia cucullata apice vix retusa glabra. Stamina fere isomorphica glabra; filamenta 3 mm longa; antherarum thecae 1.9-2 X 1 mm obovato-oblongae late biporosae, connectivo non prolongato dorsaliter basi hebeti-tuberculato tuberculo 0.2 mm alto. Stylus 4.5 X 0.5 mm glaber; stigma truncatum; ovarium 4(?)-loculare 1/2 inferum apice libero 0.7 mm alto glabro.

Type Collection: J. Cuatrecasas 21667 (holotype US 2338750), collected at "La Palma, lado derecho del río Pichindé, hoya del río Cali, Cordillera Occidental, vertiente oriental", Dept. El Valle, Colombia, elev. 2500 m, Jul. 24, 1946. "Frutex erguido, 2 m alt. con ramificacion terminal. Hoja subcoriácea, verde semibrillante haz, verde amarillenta envés. Cáliz amarillo claro. Pétalos id. Frutos rojos, maduros negruzcos."

Both suggested relatives have hypanthia only about 2 mm long and petals 1.5-4.5 mm long. M. compressicaulis has compressed-alate stems, but similar leaves; M. goniocladа has similar quadrate branches but leaf serrations 3-4 mm apart. Cuatrecasas 21667 had been distributed as M. asclepiadea Tr., a

species of Sect. Amblyarrhena with sessile large thin leaves and calyx lobes at anthesis only 0.5-0.7 mm long.

MICONIA PURACENSIS Wurdack, sp. nov.

Sect. Cremanium. M. squamulosae (Sm.) Tr. affinis sed cum floribus breviter pedicellatis nutantibus hypanthiis sparse arachnoideo-furfuraceis non costatis staminum maiorum connectivo dorsaliter appendiculato.

Frutex 4-8 m; rami obscure rotundato-quadrangulares cum foliis subtus inflorescentiisque densissime cum indumento amorphico arachnoideo demum granuloso-floccoso fulvo appresso obsiti. Petioli 0.3-0.5 cm; lamina 2-3.5 X 1-1.8 cm elliptica apice late hebeti-acuta vel obtusa vix retusa basi late acuta rigida integra non ciliata, supra primum arachnoideo-furfuracea mox glabrata, trinervata nervis duobus primariis lateralibus ca. 1.5-2 mm inframarginalibus nervis secundariis supra creberrime impressis subtus non vel vix elevatis. Panicula 2-4 cm longa oblongo-pyramidata; flores 5-meri; pedicelli 1-2 mm longi crassi paulo supra medium articulati, bracteolis non visis. Hypanthium (ad torum) 1.9-2.2 X 2.5-2.6 mm urceolatum basim versus arachnoideo-pubescens apicem versus fere glabrum; calycis tubus 0.6 mm altus, lobis interioribus 0.3-0.4 mm altis obtusis basi remotis, dentibus exterioribus vix evolutis callosis lobos interiores aequantibus. Petala 1.8-1.9 X 2.3-2.4 mm suborbicularia apice vix emarginata modice granulosa. Stamina vix dimorphica glabra; filamenta 1.9-2 mm longa; antherarum thecae oblongae 1.1-1.3 X 0.7-0.8 mm apice late (0.4-0.5 mm) dorsaliterque biporosae. Stamina antesepala: connectivum ventraliter 0.5 mm prolongatum et vix bilobulatum dorsaliter cum appendice descendente truncata 0.8 X 0.6 mm armatum. Stamina intersepala: connectivum infra thecas ventraliter 0.5 mm prolongatum dorsaliter cum tuberculo 0.4 X 0.4-0.5 mm et 0.3 mm elevato hebeti armatum. Stylus 2-3 X 0.4-0.5 mm glaber; stigma truncatum; ovarium 2(?)-loculare 2/3 inferum glabrum apice in conum crassum 0.4 mm altum circum stylum protractum.

Type Collection: J. Cuatrecasas 23449 (holotype US 2338696; isotype F), collected at "filo de la Cordillera Central al N. del volcán Puracé, alrededores de la Laguna de San Rafael, páramo 3350 m alt.", Dept. Cauca, Colombia, Jan. 29, 1947. "Arbolito 4 m alt. Hoja coriácea, verde clara, brillante haz, ocrácea envés. Pétalos blancos."

Paratypes: Cauca: Cuatrecasas 14645 (F), from "páramo del Puracé al sur del Volcán en el filo de la Cordillera, San Francisco, 3450-3400 m alt., Cordillera Central", 23 Jul. 1943; H. Antonio C. 75 (F), from "Páramo de las Papas, elev. 3100-

3500 m", Jan. 1947. El Valle: Cuatrecasas 20340 (F, US), from "cabeceras del río Tuluá, Quebrada Las Vegas, páramo 3400-3500 m alt., Cordillera Central, vertiente occidental," 22 Mar. 1946.

While M. squamulosa has similar (albeit generally larger) foliage, its flowers are sessile and erect or patent, the hypanthium is densely granular-squamulose and usually basally 10-costate, and the anthers have connectives with latero-ventral lobes but no large dorsal appendage. The more distantly related M. ochracea Tr. has shortly acuminate denticulate leaf blades, glabrous hypanthia, and a capitellate stigma.

HETEROTRICHUM RACEMOSUM Wurdack, sp. nov.

De congeneribus differt inflorescentiis racemiformibus.

Frutex 2-4 m; rami primum rotundato-quadrangulares demum teretes petiolique dense persistenterque laxo-strigulosi pilis gracilibus fuscis vel rufo-fuscis ca. 0.5-1 mm longis. Petioli 1-2 cm; lamina 7-12 X 3.5-6 cm elliptico-ovata apice acuta basi rotundata tenuiter coriacea i. s. fusca, supra cum tuberculis conicis setiferis (setis incurvo-erectis ca. 1 mm longis) dense obsita, subtus vix foveolata et modice gracili-setulosa pilis 0.5-1 mm longis, 5- vel sub-7-nervata nervis secundariis supra impressis subtus vix elevatis ca. 2 mm inter se distantibus. Flores 6-meri sessiles in racemo 4-10 cm longo terminali dense appresso-setoso (pilis gracilibus 1.5-2 mm longis) per paria inserti; bracteae bracteolaeque 5-7 X 1-2 mm anguste oblongae vel oblongo-lanceolatae extus strigulosae intus glabrae persistentes. Hypanthium (ad torum) 3.5 X 2.5 mm calycis dentes exterioresque modice brevi-strigosum; calycis tubus 0.6 mm altus, lobis interioribus 1.2-1.5 mm longis anguste triangularibus apice rotundatis ad margines inconspicue ciliolatis alioqui glabris, dentibus exterioribus subulatis 2.5-3 mm eminentibus; torus densiuscule glanduloso-setulosus pilis ca. 0.3 mm longis. Petala alba 7.5-8.5 X 4-4.5 mm obovato-oblonga apice truncata vel vix emarginata glabra non ciliata. Stamina dimorphica glabra, filamentis 5.9-6.1 vel 5.2-5.5 mm, connectivo ad filamenti insertionem dorsaliter inconspicue tuberculato. Stamina maiora: antherarum thecae 5.5 mm longae subulatae arcuatae basi ventraliter cum connectivo coalitae et 0.6 mm prolongatae, connectivo ventraliter bilobato lobis 0.6-0.8 mm longis acutis. Stamina minora: antherarum thecae 3.6-3.8 mm longae vix curvatae basi ventraliter cum connectivo coalitae et prolongatae, connectivo basi ventraliter ad apicem vix bilobulato lobis acutis 0.1 mm longis. Stylus 6 X 0.4-0.5 mm glaber; stigma vix clavato-expansum 0.9 mm diam.; ovarium 6-loculare

1/4-1/3 inferum vix 12-sulcatum sparse glanduloso-strigulosum apice in collum 0.6 mm altum glanduloso-ciliolatum protractum.

Type Collection: H. Pittier & M. Nakichenovich 15469 (holotype US 1933753; isotype VEN), collected at "alturas de Las Vueltas, fila de Rancho Grande", Parque Nacional Henri Pittier, Edo. Aragua, Venezuela, elev. 1500 m, July, 1947.

Paratypes (all Edo. Aragua): T. Garcia 72 (VEN), from El Paraiso, Rancho Grande; Foldats 2347 (VEN), from Cumbre Choroní; F. Fernandez 101 (US), from "cumbre, carretera Maracay-Choroní", elev. 1775 m.

All other described species of Heterotrichum have cymose or cymose-paniculate inflorescences. Vegetatively, the Aragua endemic resembles H. rostratum (Naud.) Gleas., which has cordate leaves and 8-merous flowers with very short external calyx teeth, as well as ventrally exappendiculate anthers. Among the eglandular species, H. racemosum resembles in external calyx teeth H. strigosum Tr. (with plinerved leaves), H. macrodon Planch. (with much larger flowers and exappendiculate anthers), and H. lucidum Tr. The latter species is probably the closest relative, having ventrally appendaged stamens but capitate-cymose inflorescences and 7-9(-11)-nerved leaves with only inconspicuously tuberculate upper surfaces.

CLIDEMIA AGUACLARENSIS Wurdack, sp. nov.

C. coronatae Gleas. affinis sed cum foliis vix cordatis pedicellis paulo infra hypanthium insertis.

Rami teretes dichotomi cum petiolis foliorum venis principalibus subtus inflorescentiis hypanthiisque modice stellulato-puberuli demum glabrati. Petioli 1-2.5 cm unilateraliter setulosi pilis muriculatis ad 1 mm longis; lamina 6-12 X 2.5-5 cm anguste ovata apice graditer angusteque hebeti-acuta basi vix (3-5 mm) cordata membranacea 7- vel sub-9-nervata nervulis laxe reticulatis, supra primum sparse stellulato-furfuracea demum glabrata, subtus in nervis primariis sparse setulosa pilis gracilibus laevibus ad 1 mm longis in superficie glabra, ad margines inconspicue undulato-denticulata dentibus setulosis setis appressis ca. 0.3 mm longis. Inflorescentia diffusa in ramorum axillis e basi 3-5-ramosa, ramis divaricatis ad 7 cm longis primum sparsissime setulosis setulis mox deciduis. Flores 5-meri; pedicelli 1-2.5 mm longi ad medium vel paulo supra plerumque articulati, bracteolis 0.5-1 mm longis linearibus vel oblanceolatis mox deciduis. Hypanthium (ad torum) 1.1 mm longum; calycis tubus 0.2 mm altus, lobis interioribus 0.3 X 0.9 mm oblatis vel triangularibus, dentibus exterioribus callosis non eminentibus; torus sparse setulosus.

Petala 1.7-1.8 X 1.1-1.3 mm oblongo-obovata apice rotundata glabra. Stamina fere isomorphica glabra; filamenta 1.1-1.2 mm; antherarum thecae 0.6 vel 0.8-0.9 mm longae crasse oblongae apice ca. 0.4 mm latae et minute (0.1 mm) uniporosae, connectivo non prolongato dorsaliter basi inconspicue (0.1 mm) hebeti-tuberculato. Stylus 3.1 X 0.25 mm glaber; stigma truncatum; ovarium 3-loculare 2/3 inferum, apice conico 0.2 mm alto sparse cum glandulis minutis clavatis obsito.

Type Collection: J. Cuatrecasas 22067 (holotype US 2338667; isotype F), collected "cerca del puente de Aguaclara, hoya del río Anchicayá, Cordillera Occidental, vertiente occidental", Dept. El Valle, Colombia, elev. 120 m, Sept. 29, 1946. "Sufrutex robusto, 1 m alt. Ramas divaricadas, densas. Hoja cartácea, verde oscura haz, verde pálida envés. Pétalos blancos. Anteras amarillas."

The Costa Rican relative has basally broadly acute leaf blades with patent-ciliate (hairs 1-1.5 mm long) margins, inflorescence branches only 3 cm long, and bracteoles inserted at the hypanthium base. C. diffusa Donn. Sm. is more distantly related, having purple-setose branchlets and lacking stellulate hairs. The inflorescences of the three species (as also in the next-described species) are actually terminal, becoming pseudolateral by dichotomized branch overgrowth. The general aspect of C. aguaclarensis is rather like that of the two 4-merous species, C. purpureo-violacea Cogn. and C. ramiflora Gleas., as well as several species of Ossaea.

CLIDEMIA DIGUENSIS Wurdack, sp. nov.

C. aguaclarensi Wurdack affinis sed cum ramis inflorescentiis hypanthiisque dense setulosis, ovario setuloso.

Rami teretes cum petiolis foliorum venis subtus inflorescentiis hypanthiisque modice vel dense setulosi (pilis 0.5-1 mm longis) et modice caduceque stellulato-puberuli. Petioli 0.7-2.5 cm; lamina 5.5-14 X 2.5-9.5 cm anguste ovata vel ovata apice anguste hebeti-acuta basi vix (3-7 mm) cordata rigide membranacea, supra glabra venis venulisque creberrime impressis, subtus in venulis sparse setulosa in superficie glabra, 7-9-nervata ad margines appresso-ciliolata. Inflorescentia hypanthiumque pilis exceptis ut in C. aguaclarensi. Petala 1.3 X 1.1 mm obovata rotundata glabra. Stamina fere isomorphica; filamenta 1.2-1.3 mm glabra; antherarum thecae 0.8-0.9 mm longae crasse oblongae poro 0.15 mm diam., connectivo non prolongato dorsaliter 0.05 vel 0.15 mm calcarato. Stylus 3.4 X 0.25 mm glaber; stigma truncatum; ovarium 3-loculare 2/3-3/4 inferum apice conico sparse cum glandulis minutis clavatis et circum styli basim sparse cum setulis

ornato.

Type Collection: J. Cuatrecasas 23742 (holotype US 2338702; isotype F), collected in "quebradita del km. 51, lado izquierdo del río San Juan en la región de Queremal, hoya del río Digua, Cordillera Occidental, vertiente occidental", Dept. El Valle, Colombia, elev. 1540-1650 m, Feb. 25, 1947. "Frutex de ramas bejucosas. Hoja rugosa, verde grisáceo mate haz, verde claro brillante envés. Ramas de la inflorescencia violáceas. Pétalos blancos. Anteras amarillas."

Despite the marked pubescence disparity, C. diguensis seems to be merely a higher-elevation version of C. aguaclarensis. In Costa Rica, C. reitziana Cogn. & Gl. ex Gl. and C. coronata Gl. are a similar pair of vicariads, with however the reverse altitude-pubescence relation.

CLIDEMIA FAUSTA Wurdack, sp. nov.

Sect. Sagraea. C. donnell-smithii Cogn. distanter affinis sed cum foliis minoribus sessilibus glabris hypanthii pilis petalisque brevioribus.

Rami teretes foliaque glabri. Folia sessilia vel vix (ad 1 mm) petiolata; lamina 3-7 X 1.5-3 cm subcoriacea apice longe (1-2 cm) graditer angusteque acuminata basi vix (ad 2 mm) cordata 5-nervata nervis secundariis non vel indistincte evolutis ad margines inconspicue serrulata dentibus ca. 2 mm inter se distantibus. Cymae in foliorum axillis plerumque e basim trifurcatae 3-5-florae, pedunculo ad 7 mm longo cum pedicellis bracteolisque sparse setuloso; pedicelli 1.5-2 mm longi ad medium bibracteolati, bracteolis 1 mm longis linearibus persistentibus; flores 4-meri. Hypanthium (ad torum) 1.9 mm longum dense setulosum setulis simplicibus 0.8-1.3 mm longis; calycis tubus 0.2 mm altus, lobis interioribus 0.3 mm longis apice rotundatis, dentibus exterioribus 3.3-3.7 mm eminentibus linearibus anguste acutis sparse setulosis; torus glaber. Petala 2.3-2.5 X 0.9 mm oblonga apice rotundata glabra. Stamina isomorphica glabra; filamenta 1.3 mm longa; antherarum thecae 0.9 mm longae oblongae minute (0.1 mm) uniporosae, connectivo non prolongato non appendiculato. Stylus 3.4 X 0.2 mm glaber; stigma truncatum; ovarium 4-loculare omnino inferum glabrum.

Type Collection: J. Cuatrecasas 19987 (holotype US 2338664), collected at "quebrada de Aguadulce, Bahía de Buenaventura, Costa del Pacífico," Dept. El Valle, Colombia, elev. 0-10 m, Feb. 24, 1946. "Fruticuletum epífito de ramas

colgantes. Hoja verde clara. Cáliz verde claro. Pétalos blancos. Filamentos blancos. Anteras rojizas."

Vegetatively, the suggested Guatemalan relative, with its setose branchlets and larger petiolate strigose leaves, does not resemble C. fausta; however, the floral structure is quite similar, apart from the relatively shorter external calyx teeth and larger (3.7 X 1.1 mm) petals. The general vegetative aspect of the Buenaventura ("lucky") species is rather like that of Mouriri parvifolia Benth., while the inflorescence and long sepals recall Ossaea.

- - - - - - - - - - - - - - - -

MATERIALS TOWARD A MONOGRAPH OF THE GENUS VERBENA. III

Harold N. Moldenke

VERBENA L.

Additional & emended literature: Brunfels, Herb. Viv. Icon. 1: 119--120. 1532; Fuchs, Hist. Plant. Basil. 592--593. 1542; Ruel, Ped. Dioscor. Anazarb., ed. 1, 317.(1547) and ed. 2, 519--521. 1551; Tragus, Stirp. 210. 1552; Gesner, Collect. Stirp. 113. 1553; Matth., Comment. 466--467. 1554; Cordus, Op. Posth. 66. 1561; Matth., Disc. Ped. Dioscor. Anazarb. 1106--1108. 1568; Caesalp., De Plant. 450--451. 1583; Dalech., Hist. Gen. Pl. 237. 1587; Lobel, Icon. Stirp. 534--535. 1587; Tabern., Icon. Plant. 132. 1590; Gerarde, Herbal 580--582. 1597; Clus., Rar. Plant. Hist. 4: xlv--xlvi. 1601; Dodon., Pe,pt. 125, 150, & 250. 1616; Matth., Op. Omn. Comment. 741--742. 1624; J. Parkinson, Theat. Bot. 675. 1640; J. Bauhin, Hist. Plant. Univ., ed. 1, 3:443--444. 1651; Bont., Hist. Nat. Ind. Orient. 150. 1658; K. Bauhin, Pinax Theatr. Bot., ed. 2, 269. 1671; K. Bauhin, Prodr. Theatr. Bot. 125. 1671; Imperato, Hist. Nat. 673--674. 1672; Matth., Apolog. 174 & 214. 1674; Zanoni, Hist. Bot. 203. 1675; Ray, Hist. Plant. 535--536. 1686; P. Hermann, Hort. Acad. Lugd.-Bat. Cat. 699. 1687; J. Bauhin, Hist. Plant. Eur. 2: 494. 1689; Breyn, Prodr. Fasc. Rar. Pl., ed. 1, 2: 100--102. 1689; Riv., Introd. Gen. Remherb. [24], Icon. [56 & 57]. 1690; Riv., Ord. Pl. Irreg. Monop. 81. 1690; Pluk., Phyt. 327, fig. 7. 1692; Petiv., Mus. Petiv. 60. 1695; Pluk., Almag. Bot. 283 & 382, pl. 321, fig. 1. 1696; Sloane, Cat. Pl. Jamaic. 64. 1696; Magn., Hort. Reg. Monsp. 203. 1697; P. Hermann, Parad. Bot., ed. 1, 242, pl. 242. 1698; Tourn., Inst. Rei Herb. 200. 1700; Commel., Hort. Med. Amstel. 2: 223. 1701; Plum., Nov. Plant. Am. Gen. 6. 1703; Ray, Hist. Plant. 3: Suppl. 285--288 & App. 249. 1704; P. Hermann, Parad. Bot., ed. 2, 242, pl. 242. 1705; Sloane, Hist. Nat. Jamaic. 1: 171, pl. 107, fig. 1. 1707; Boerh., Ind. Pl. Hort. Lugd. 1: 187. 1710; Munting, Phytograph. Cur. 784. 1711; Barr., Pl. Gall. Hisp. 30, pl. 1146. 1714; Vaill., Serm. Struct. Flor. 49. 1718; Boerh., Ind. Alt. Plant. Hort. Act. Lugd. 1: 186--187. 1727; P. Hermann, Thes.